MONTHLY WEATHER MAP

METEOROLOGICAL SERVICE, DOMINION OF CANADA

DECEMBER 1930

TEMPERATURE

During December the major circulation of air from the north appeared to enter the continent from the north Pacific Ocean into southern British Columbia and the adjacent or contiguous Western States. This northern current and the normal westward moving tropical current, passed each other mutually to the left, producing an apparent clockwise or anticyclonic system in the Western States. Such a system prevailed from the fourth to the eleventh, and from the seventeenth to the end of the month, and produced very much milder weather in Western Canada than usually obtains in December.

Next in importance were major outflows from the northeast or north central polar latitudes from the first to the fifth, from the eleventh to the sixteenth (continuing to affect the North Shore of the Gulf of the St. Lawrence till the eighteenth), and one commenciug north of Coppermine and Coronation Gulf on the twenty-second which lasted till the end of the month.

Warm fronts moving north produced generally less than the usual precipitation except in the Atlantic provinces. One was passing up the east coast at the beginning of the month, while other warm tongues, beginning usually in Texas, affected eastern Canada from Ontario to the Atlantic on the sixth and seventh, on the eleventh and twelfth, (Atlantic provinces on the fourteenth), on the eighteenth western Ontario, nineteenth southwestern Ontario. From the twenty-third to the end of the month, only the most easterly parts of the Dominion were affected to any noticeable extent.

Mean temperatures were ten to twenty degrees or more in excess of the normal December mean over the greater part of Alberta, Saskatchewan, northern Manitoba, northern British Columbia, southern Yukon and the northern territories. In southern British Columbia and along the Pacific coast the excess ranged from three to eight degrees, in southern Manitoba from three to thirteen degrees, in Ontario from nothing in the extreme southwest to seven degrees in the far northwest, in Quebec from two degrees on the North Shore of the Gulf to eight degrees in the far north. In the Atlantic provinces there were small deficiencies in some districts and small excesses in others.

PRECIPITATION

Precipitation was generally less than the normal amount over the Dominion except in Nova Scotia, Prince Edward Island and parts of northern New Brunswick, and in some districts of the far north. The deficiency was thirty-five to eighty per cent. of the normal amount in the lower Fraser valley and on southern Vancouver Island, while in the southern interior of British Columbia the deficiency was fifty to one hundred per cent. In northern British Columbia and on the north Pacific coast deficiencies were smaller with local excess.

In Alberta and Saskatchewan the deficiency was forty to eighty per cent. of the normal amount and in Manitoba twenty to sixty-five per cent.

In Ontario, there were deficiencies of about twenty-five per cent. in the Rainy River and Lake of the Woods region, twenty to sixty per cent. east of Lake Superior, twenty to fifty per cent. between Lakes Huron and Erie, twenty to seventy-five per cent. in eastern Ontario.

In Quebec locally along the middle St Lawrence and locally in the northern districts precipitation was normal or slightly in excess but in most districts there were deficiencies of twenty to sixty per cent.

In the Atlantic Provinces there was an excess of twenty to forty per cent. in Nova Scotia, Prince Edward Island and part ofnortheastern New Brunswick while over the greater part of New Brunswick there was a deficiency of twenty to forty-five per cent.

BRITISH COLUMBIA

The month was very mild from the upper Fraser valley northward to the Yukon, with mean temperatures exceeding normal by fifteen to twenty degrees in the Peace River valley. In the southern interior valleys the excess ranged from nothing in the extreme south to five degrees or more in the Thompson and upper Columbia valleys. From southern Vancouver Island along the coast to Alaska the excess was three to seven degrees.

Precipitation was generally deficient in the southern districts by fifty to seventy-five per cent. for the most part. Local excess occurred in the northern interior. Lakes are at very low levels and irrigation storage waters are low.

ALBERTA, SASKATCHEWAN and MANITOBA

December was very mild and dry. Temperatures averaged ten to fifteen degrees higher than normal over the greater part of Alberta, Saskatchewan and western Manitoba and three to eight degrees higher than normal over southeastern Manitoba. In parts of the Peace River valley and the far north the excess was much greater. The average deficiency of precipitation over the wheat region was about sixty per cent. of the normal amount.

ONTARIO

In southwestern Ontario temperatures averaged about normal while elsewhere they were generally three to six degrees above normal. Precipitation was twenty to sixty per cent. deficient although a few points had the normal amount or better.

QUEBEC

The month was generally mild and except in a few districts on both sides of the middle St. Lawrence where normal precipitation occurred, the total precipitation was twenty to sixty per cent. below the normal amount.

ATLANTIC PROVINCES

Mean temperatures in Prince Edward Island, southwestern New Brunswick, and in Nova Scotia except central districts, were one or two degrees above the December normal mean. On the North Shore and in northeastern New Brunswick as well as in central Nova Scotia and along the southwestern coast there were deficiencies of one to three degrees.

Precipitation was chiefly snow and was twenty to forty per cent. above normal in Nova Scotia, Prince Edward Island and northeastern New Brunswick. Elsewhere in New Brunswick there was a deficiency of twenty to forty-five per cent. Heavy snowfalls occurred in Cape Breton and Prince Edward Island.

HUDSON STRAIT

Temperatures were six to nine degrees above normal in the Strait and six to eight degrees above normal on the west coast of Hudson Bay. At Coppermine in the western Arctic region temperatures were about twelve degrees above normal.

A. J. CONNOR.

SPECIAL REPORTS

NOTE—Column H is Highest Temperature; Column L is Lowest Temperature; Column P is Precipitation in inches; Column I denotes total of bright sunshine in hours during the month. Column Sg denotes depth of snow on ground in inches, where given.

BRITISH COLUMBIA

STATION	H	L	P	I	STATION	H	L	P	I	STATION	H	L	P	I
Victoria	52°	33°	0.8	65	Chilliwack	52°	22°	4.4		Invermere	38°	-4°	0.2	23
Goldstream Lake			3.5		Agassiz	52°	25°	2.9	34	Cranbrook	39°	-1°	0.0	
Sooke	56°	27°	2 7		White Rock	58°	28°	2.5		Glacier	39°	8°	3.6	
Duncan	55°	20°	1.7		Salmon Arm	41°	15°	0.8	21	Field	32°	0°		
Nanaimo	49°	28°	2.5	41	Vernon	42°	15°	0.5	29	Golden	28°	4°	0.1	
Courtenay			4.7		Oliver	43°	14°	0 1	19	Kamloops	43°	18°	0.3	48
Vancouver	54°	27°	5.2	41	Summerland	44°	29°	0.1	36	Prince George	46°	12°	1.9	
New Westminster	54°	26°	4.9		Penticton	43°	12°	0.1		Prince Rupert	53°	33°	15.5	

ALBERTA, SASKATCHEWAN AND MANITOBA

STATION	H	L	P	I	Sg.	STATION	H	L	P	I	Sg.
Beaver Lodge	62°	2°	0.4	72		Brandon	36°	-26°	0.5	93	6
Edmonton	41°	4°	0.3	82	1	Treesbank	40°	-25°	0.6		2
Calgary	58°	10°	0.5	171		Birtle	39°	-22°	0.5		3½
Medicine Hat	56°	10°	0.3	109	0	Treherne	40°	-19°	0.5		8
Scott	42°	-11°	0.4	75		Ninette	62°	-15°			3
Battleford	40°	-7°	0.1			Morris	36°	-22°	0.2		24
Prince Albert	40°	-17°	0.2		T	Morden	42°	-21°	0.6	111	
Swift Current	56°	-2°	0.2	94		Moose Horn Bay	42°	-22°	1.1		
Moose Jaw	52°	-7°	0.2	103		Great Falls	35°	-24°	0.5		
Qu'Appelle	45°	-17°	0.3	96	2	Oak Bank	40°	-26°	1.0		15
Le Pas	38°	-22°	0.5	124	5	Pinawa	35°	-28°	0.8		
Minnedosa	38°	-24°	0.2		2	Russell	38°	-27°			
Winnipeg	38°	-20°	0.6	96	7	Sprague	35°	-24°	0.4		
Dauphin	44°	-18°				Waskada	35°	-25°	0.7		

ONTARIO

Atikokan	38°	-30°	1.0			Scotia Junction	37°	-21°	2.1		12
Mine Centre	38°	-26°	1.2		10	Beatrice	39°	-17°	3.4		14
Ignace	38°	-33°	1.0			Barrie	40°	-13°	1.9		
Kenora	36°	-21°	1.1			Walkerton	43°	-4°	0.6		15
Sioux Lookout	34°	-27°	1.1		8	Mount Forest	41°	-5°	2.0		11
Longlac	39°	-26°	0.7			Brucefield	44°	3°	1 3		
Port Arthur	40°	-12°	0.6		3	Lucknow	42°	-2°	2.3		
Quorn	35°	-33°	1.0		10	Southampton	42°	1°	2.3		10
Schreiber	37°	-15°	1.7		14	Stratford	43°	-2°	2.3		6
Blind River	45°	-12°	1.0		4½	London	47°	0°	3.6		12½
Sault Ste. Marie	41°	-15°				Woodstock	45°	1°	1.3	57	2¾
White River	36°	-29°	1.4		12	Paris	44°	4°	1.3		1½
Biscotasing	34°	-27°	1.1			Alton	43°	-5°	2.7		6
Chapleau	36°	-25°	1.4		12	Harrow	46°	-2°	0.4	51	
Ruel	36°	-30°	1.7		20	Simcoe	46°	-1°	2.3		3
Cochrane	39°	-23°	2.0		13	Toronto	45°	1°	1.2	55	1
Haileybury	34°	-18°	0.9		7	Beeton	47°	10°	1.1		¼
Heaslip	36°	-24°	1.7			Bloomfield	48°	-10°	1.3		6
Iroquois Falls	35°	-24°	1.8			Queensboro'	38°	-12°	1.3		5
Kapuskasing	35°	-25°	1.9	36		Peterboro'	45°	-12°	1.0		1
New Liskeard	38°	-20°	1.4	24		Kingston	42°	-6°	1.5	56	2
Algonquin Park	40°	-23°	0 8			Brockville	43°	-7°	0.7		2½
Madawaska	38°	-24°	0.4			Morrisburg	39°	-7°	1.6		2½
Montreal River	39°	-24°	1.8			Ottawa	40°	-11°	2.5		12
Crystal Falls	43°	-25°	2.1		21	Ottawa (Exp.Farm)	38°	-19°	2.0	50	10
Providence Bay	42°	-12°	2.2		8	Renfrew	52°	-12°	1.2		
Parry Sound	40°	-13°	4.4		28	Pembroke	39°	-11°	1.8		8

QUEBEC

STATION	H	L	P	I	Sg.
Cedars	39°	-6°	0.9		4
Macdonald College	39°	-6°	1.5		3
Montréal	40°	-6°	1.5		5
Farnham	40°	-12°	1.8	52	5
Brome	37°	-22°	2.1		5
Nicolet	38°	-10°	2.1		
Sorel	37°	-13°	2.1		12
Thetford Mines	40°	-7°	0.6		
Lennoxville	44°	-13°	1.7	44	6
Sherbrooke	39°	-11°	1.8		6
Drummondville	41°	-15°	4.1		10½
Beauceville	40°	-15°	1.9		8
Lake Mégantic	36°	-13°	1.5		
Cap Rouge	36°	-10°	2.0	25	17
Québec	36°	-10°	3.4		23
St. Joachim	35°	-11°	1.6		8
Armagh	35°	-13°	1.1		
Ste. Anne de la Pocatiére	35°	-16°	1.4		14
La Malbaie	39°	-9°	1.3		
Chicoutimi	34°	-7°	2.3		14
Roberval			2.1		
Albanel	33°	-16°	1.1	43	8
Manouan	35°	-20°	1.3		
Lake Kempt	34°	-24°	2.4		
La Tuque	35°	-19°	1.5		
La Loutre Rapids	33°	-24°	2.8		
Joliette	43°	-16°	1.0		6
Huberdeau	36°	-18°	2.4		17
Mont Laurier	35°	-24°	1.5		12
St. Lin des Laurentides	59°	-27°	0.8		
Maniwaki	36°	-15°	2.6		17
St. Gabriel de Brandon	35°	-10°	1.4		10
Abitibi	35°	-25°	1.3		16
Dolbeau	39°	-18°	3.1		18
La Ferme	36°	-28°	1.9	14	12
Ville Marie	36°	-16°	1.1		8

ATLANTIC PROVINCES

St. John	45°	-4°	3.4	94	6
Aroostook	37°	-15°	1.7		8
Bathurst	38°	-8°	2.5		13
Chatham	37°	-11°	1.8		8
Edmundston	36°	-7°	1.1		7
Fredericton	52°	-7°	2.8	73	14
Fredericton (Experimental Farm)	51°	-7°	2.8	74	13
Gagetown	53°	-10°	3.4		7
Grand Falls	37°	-12°	1.6		10
Harvey	34°	-7°	2.0		14
Moncton	44°	-7°	3.8		
Musquash	52°	-5°	4.1		10
McAdam Junction	50°	-7°	2.3		12
Rexton	53°	-9°	3.6		
Sussex	45°	-11°	3.6		6
Woodstock	42°	-8°	1.7		12
Annapolis Royal	56°	4°	3.8	54	4
Digby	47°	5°	4.6		4
Kentville	56°	2°	5.0	57	12
Liverpool	53°	-2°	7.1		6
Nappan	53°	-4°	4.3	71	
Sydney	55°	14°	7.5		28
Truro	56°	-5°	4.4		
Upper Stewiacke	55°	-12°	5.6		8
Wolfville	48°	4°	4.7	66	7
Yarmouth	58°	9°	6.2		4
Charlottetown	56°	6°	4.7		12
Charlottetown (Experimental Farm)	50°	6°	5.5	55	

Great Whale River
Big River
James Bay
Trout Lake
Albany River
Moose Fort
Hope
Sioux Lookout
Port Arthur
White River
Haileybury
Houghton
Marquette
Sault Ste. Marie
Escanaba
Alpena
Green Bay
Ludington
Saginaw
Port Huron
Grand Haven
Grand Rapids
Detroit
Milwaukee
Madison
Chicago
Toledo
Cleveland
Erie
Buffalo
Rochester
Oswego
Syracuse
Albany
Boston
Concord
Northfield
Portland
Canton
Kingston
Ottawa
Pembroke
Sudbury
Toronto
Lake Michigan
Lake Erie
Lake Ontario
Pittsburg
Harrisburg
Philadelphia
New York
Scranton
Binghampton
New Haven
Block I.
Nantucket
Greenville
Edmonton
Yarmouth
Chatham
Fame Pt.
Father Pt.
Harrington Harbour
N.W. River
Belle Isle
Sable I.
+4°
90°
85°
80°
75°
70°
65°
60°
50°
45°
40°

CE, DOMINION OF CANADA.
R MAP
Y, 1931 Dec 30
from normal mean temperature; also total precipitation
month.
Ellesmere Island
Ponds Inlet
Godhaven
Angmagssalik
Godthaab
Julianehaab
Pangnirtung
Nottingham I.
Ashe Inlet
Cape Wolstenholme
Wakeham
Hopes Advance
Resolution
Fort Burwell
Fort Chimo
Nain
90°
85°
80°
75°
70°
65°
60°
55°
50°
45°
40°
35°
60°
55°
+4°
+8°
17
19
20
22
-4
0·1
2
0·4
6
0·4
-11

REFERENCES.
The upper Figures give the mean Temperature.
The lower Figures give the precipitation in inches.
The Black lines shew the difference from the normal mean Temperature.
The shading shews approximately the precipitation of the month.
Less than 1 inch
Less than 2 inches
Less than 3 inches
Less than 4 inches
More than 4 inches
+16°
+12°
+8°
+4°
+ −
− +
Mt Murray
Ile à la Crosse
Churchill River
Nelson R.
Lac la Ronge
Pikwitonei
Athabaska Landing
Edmonton
Jasper
Prince Albert
Battleford
The Pas
Norway House
Saskatoon
Calgary
Kamloops
Nelson
Seattle
Tacoma
North Yakima
Spokane
Wallace
Kalispell
Havre
Lewiston
Walla Walla
Portland
Missoula
Helena
Yellowstone Park
Billings
Miles City
Williston
Devils Lake
Bismarck
Moorhead
Ellendale
Duluth
Sheridan
Pocatello
Rapid City
Pierre
Huron
St Paul
Lander
Valentine
Charles City
Sioux City
Salt Lake City
Cheyenne
North Platte
Omaha
Winnipeg
Qu'Appelle
Minnedosa
Swift Current
Medicine Hat
Moose Jaw
Battleford
Triangle L.
Tatoosh I.
North Head
Columbia
Saskatchewan
Red River
Assiniboine
120°
115°
110°
105°
100°
95°
45°
50°

METEOROLOGICAL SERV
WEATH
JANU
Chart shewing the mean temperature and the differen
of t
+12°
0
0·4
Fort Yukon
+12°
+8°
Herschell I.
150°
145°
140°
130°
125°
120°
115°
110°
105°
100°
95°
60°
+8°
Eagle
7
0·2
−10
0·2
McPherson
+8°
+4°
2·2
Good Hope
5
1·3
Cambridge Bay
−13
0·9
Coppermine
+12°
−4
0·3
Great Bear Lake
Norman
+8°
Mackenzie River
30
1·2
38
10·9
+16°
1
0·8
Simpson
55°
Hay River
Fort Smith
8
1·3
Height of Land
42
15·5
+20°
Chipewyan